

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Amended) A protein sensing molecule that is capable of binding an analyte in a sample, the protein sensing molecule comprising:

a first detectable quality that changes in a concentration dependent manner when the protein sensing molecule is bound to the analyte; and

a second detectable quality, comprising a long-lived metal complex label, that does not undergo substantial change undergoes a sufficiently small percentage change when the protein sensing molecule is bound to the analyte to function as a reference.

2. (Original) The protein of claim 1, wherein the first detectable quality comprises a label.

3. (Canceled).

4. (Amended). The protein of claim 1, wherein the first detectable quality comprises a label, ~~and wherein the second detectable quality comprises a label that is different from the label of the first~~ second detectable quality.

5. (Original) The protein of claim 1, wherein the first detectable quality comprises a polarity-sensitive fluorophore label.

6. (Original) The protein of claim 1, wherein the first detectable quality comprises at least one of acrylodan and anilino-naphthalene sulfonate.

7. (Canceled).

8. (Canceled).

9. (Amended) ~~The protein of claim 1, wherein the second detectable quality comprises a ruthenium complex label or osmium complex label. A protein sensing molecule that is capable of binding an analyte in a sample, the protein sensing molecule comprising:~~  
a first detectable quality that changes in a concentration dependent manner when the protein sensing molecule is bound to the analyte; and

a second detectable quality, comprising a ruthenium complex label or osmium complex label, that undergoes a sufficiently small percentage change when the protein sensing molecule is bound to the analyte to function as a reference.

10. (Amended) The protein of claim 1, wherein the second detectable quality ~~is attached at the N-terminal of the protein~~ undergoes a change of less than 5% when the protein sensing molecule is bound to the analyte.

11. (Canceled).

12. (Amended) The protein of claim 1, wherein the first detectable quality comprises a polarity-sensitive fluorophore label, ~~and wherein the second detectable quality comprises a long-lived metal complex label.~~

13. (Amended) ~~The protein of claim 1, wherein the analyte comprises glutamine. A~~ protein sensing molecule that is capable of binding an analyte, comprising glutamine, in a sample, the protein sensing molecule comprising:  
a first detectable quality that changes in a concentration dependent manner when the protein sensing molecule is bound to the analyte; and

a second detectable quality that undergoes a sufficiently small percentage change when the protein sensing molecule is bound to the analyte to function as a reference.

14. (Original) The protein of claim 1, wherein the analyte comprises a naturally occurring sugar, sugar derivative, or sugar analog.

15. (Original) The protein of claim 1, wherein the analyte comprises at least one of glucose, lactose, galactose, sucrose, and maltose.

16. (Original) The protein of claim 1, wherein analyte binding causes the first detectable quality to be shielded.

17. (Original) The protein of claim 1, wherein analyte binding causes the first detectable quality to be unshielded.

18. (Original) The protein of claim 1, wherein the protein comprises an analyte-binding site.

19. (Original) The protein of claim 1, wherein the protein comprises at least one

of modified glutamine-binding protein, modified glucose-binding protein, modified hexokinase, and modified glucokinase.

20. (Original) The protein of claim 19, wherein the protein is modified by substituting at least one cysteine residue therein.

21. (Original) The protein of claim 19, wherein the protein is modified by substituting two cysteine residues therein.

22-43. (Canceled).